

CLAIMS

- 1 1. A locking apparatus that is releasably securable within a landing nipple of a tubing string,
2 the locking apparatus comprising:
3 a tool housing with an associated inner mandrel;
4 a locking member that is radially moveable with respect to the tool housing, the locking
5 member being selectively disposable into a landing nipple receptacle to secure the locking
6 apparatus within the tubing string;
7 a packing seal retained upon the inner mandrel, the packing seal being axially
8 compressible; and
9 a compression member associated with the tool housing for selective axial compression
10 of the packing seal to urge the packing seal into sealing engagement with the tubing string.
- 1 2. The locking apparatus of claim 1 wherein the tool housing is interconnectable with well
2 control tools.
- 1 3. The locking apparatus of claim 1 wherein the compression member is actuated to
2 compress the packing seal by axially translating the inner mandrel with respect to the tool
3 housing.
- 1 4. The locking apparatus of claim 1 wherein the packing seal comprises a chevron packing
2 seal member.

1 5. The locking apparatus of claim 1 wherein the packing seal comprises a multiple chevron
2 seal members in a stacked configuration.

1 6. The locking apparatus of claim 1 further comprising a locking dog cage and wherein the
2 locking member comprises a locking dog that is urged radially outwardly through a slot in the
3 locking dog cage.

1 7. The locking apparatus of claim 6 wherein the compression member comprises a ram end
2 of the locking dog cage.

1 8. The locking apparatus of claim 1 wherein the packing seal comprises a dynamic seal
2 assembly.

1 9. A locking apparatus that is releasably securable within a landing nipple of a tubing string,
2 the locking apparatus comprising:

3 a tool housing with an associated inner mandrel;

4 a locking member that is radially moveable with respect to the tool housing, the locking
5 member being selectively disposable into a landing nipple receptacle to secure the locking
6 apparatus within the tubing string;

7 a packing seal retained upon the inner mandrel, the packing seal being axially
8 compressible;

9 a compression member associated with the tool housing for selective axial compression
10 of the packing seal to urge the packing seal into sealing engagement with the tubing string; and

11 a locking dog cage and wherein the locking member comprises a locking dog that is
12 urged radially outwardly through a slot in the locking dog cage.

1 10. The locking apparatus of claim 9 wherein the compression member is actuated to
2 compress the packing seal by axially translating the inner mandrel with respect to the tool
3 housing.

1 11. The locking apparatus of claim 9 wherein the packing seal comprises a chevron packing
2 seal member.

1 12. The locking apparatus of claim 9 wherein the packing seal comprises a multiple chevron
2 seal members in a stacked configuration.

1 13. The locking apparatus of claim 9 wherein the packing seal comprises a dynamic seal
2 assembly.

1 14. The locking apparatus of claim 9 wherein the compression member comprises a ram end
2 of the locking dog cage.

1 15. A method of securing a locking apparatus within a tubing string comprising the steps of:
2 disposing the locking apparatus within a tubing string to a location adjacent a landing
3 nipple;

4 moving a locking member radially outwardly from the locking apparatus and into locking
5 engagement with a landing nipple receptacle; and
6 axially compressing a packing seal on the locking apparatus to urge the packing seal
7 radially outwardly into sealing engagement with the tubing string.

1 16. The method of claim 15 further comprising the step of securing the locking apparatus to
2 at least one well control tool prior to disposing the locking apparatus in the tubing string.